



Ms. Carmen Santos
U.S. Environmental Protection Agency, Region 9
Mail Code WST-5
75 Hawthorne Street
San Francisco, California 94105

Subject:

Revised Draft ~~Addendum~~—PCB Cleanup Completion Report, College for Certain,
1009 66th Avenue, Oakland, California

Dear Ms. Santos:

On behalf of Aspire Public Schools (Aspire) and College for Certain, LLC (CFC), ARCADIS U.S., Inc. (ARCADIS) has prepared this report to provide additional information regarding the remediation of soil containing polychlorinated biphenyls (PCBs) at the Former Pacific Electric Motors Facility located at 1009 66th Avenue in Oakland, California (Site; Figures 1 and 2). The majority of the environmental work ~~conducted~~ was conducted by LFR Inc. (LFR), on behalf of CFC. LFR was purchased by ARCADIS in December 2008 and became fully integrated into ARCADIS in January 2010.

The remedial tasks conducted at the Site were completed in accordance with 40 Code of Federal Regulations (CFR) §761.125(c)(5) that describes the implementation of the Toxic Substances Control Act (TSCA) Self-Implementing Cleanup Plan (SICP). The scope of work for the SICP was presented in a letter from LFR to the U.S. Environmental Protection Agency (U.S. EPA), dated October 23, 2009 and prepared for ~~Aspire Public Schools (Aspire)~~ (LFR 2009c). ARCADIS submitted a report entitled "Implementation of the Toxic Substances Control Act Self-Implementing Cleanup Notification at the Former Pacific Electric Motors Facility, 1009 66th Avenue, Oakland, California" on August 12, 2011 (Implementation Report; Attachment 6; ARCADIS ~~2011b~~2010a). The Implementation Report documented the remedial actions that took place as outlined in the SICP.

Following the submittal of the Implementation Report, additional remedial tasks associated with the SICP were conducted at the Site as part of the redevelopment of the Site from November 2010 to August 2011. In addition, ARCADIS prepared and submitted a draft Operations and Maintenance Plan (O&M Plan) and deed notice for the Site in October 2011 (a Revised Draft O&M Plan is included as Attachment 5 and a Revised Draft Land Use Covenant and Environmental Restriction is being submitted under separate cover). Following review of these draft documents, the

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Our ref:
EM009155.00~~0916-00002~~

U.S. EPA requested the following information to document the additional remedial tasks that were completed at the Site:

- Summary of additional remedial actions conducted following the submittal of the Implementation Report;
- A summary of the PCB-affectedcontaining soil that remains at the Site;
- Summary of mitigation measures for the PCB-affectedcontaining soil that remains at the Site;
- Soil sample laboratory analytical data (Attachment 1);
- Revised health risk screening calculations (Attachment 2);
- Fill material source information and laboratory analytical data (Attachment 3);
- Waste disposal information (Attachment 4); and
- Revised figures showing:
 - Details regarding the surface cap, the landscaped areas, and the redevelopment plan (Figure 3);
 - Survey coordinates for the location of soils beneath the cap containing PCBs at concentrations above the cleanup level of 0.130 milligrams per kilogram (mg/kg); (Figure 3); and
 - Areas where cleanup levels were achieved, where the cleanup levels were not achieved, and where soils contaminated with PCBs above the cleanup level were encapsulated-consolidated beneath the cap at depths ranging from approximately 1 to 4 feet below the current ground surface (see Figure 43).

Therefore, this report, along with the Implementation Report, provides a comprehensive summary of the SICP.

The Site has been redeveloped into the Aspire Golden State College Preparatory Academy, which serves grades 6 through 12 and has capacity for 570 students; the

school opened in August 2011. The school occupies approximately 1.4 acres and consists of:

- 3 two-story buildings (approximately 41,430 square feet total including 24 full-sized classrooms, 4 labs, 3 girls and 3 boys restrooms, and 4 staff restrooms);
- An asphalt-paved parking area with access via two driveways on 66th Avenue (one for ingress and one for egress);
- An asphalt-paved area for basketball; and
- Several planter areas.

Additional Remedial Actions Conducted at the Site after the Submittal of the Implementation Report

Post-Demolition Surface Soil Samples

Post-demolition surface soil samples (PD-1 to PD-7) were collected in May 2010 within the footprint of the two buildings that were demolished at the Site ~~(see Figure 3). The samples were and~~ analyzed for PCBs. The purpose of these samples was to document the surface soil quality following the demolition of the two buildings. As indicated in ~~the table~~ Table 1 below, six of the post-demolition surface soil samples contained PCBs at concentrations that exceeded the site-specific cleanup goal of 0.130 ~~milligrams per kilogram (mg/kg).~~ Laboratory reports for these samples are included as Attachment 1 ~~to this letter.~~ As requested by U.S. EPA, Figure 3-4 illustrates the locations of these ~~samples collected at the Site that contained concentrations of PCBs greater than and less than the site-specific cleanup goal.~~

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Table 1
Post-Demolition Surface Soil Samples
concentrations in mg/kg

Sample ID	Notes	Date	PCBs
PD-1	1, <u>2</u>	05/28/10	0.372
PD-2	1, <u>2</u>	05/28/10	0.940
PD-3	1, <u>3</u>	05/28/10	0.344
PD-4	1, <u>3</u>	05/28/10	0.321
PD-5	1, <u>3</u>	05/28/10	0.209
PD-6	1, <u>2</u>	05/28/10	0.535
PD-7		05/28/10	0.100
REGULATORY CONCENTRATIONS			
Soil Cleanup Goal			0.130

Notes:

1 - Concentrations of PCBs are reported as a combination of Aroclor 1254 and 1260. Samples analyzed by Curtis & Tompkins Ltd. for PCBs using EPA Test Method 8082.

2 - Denotes soil remains in place at the Site beneath the cap (see Figure 3).

3 - Denotes soil near this sample was excavated and consolidated on site near soil sample locations W1-SDWall2' and W2-SDWall2' (see Figures 3 and 4).

Initially, soil represented by these post-demolition surface soil samples was to remain in place. However, in order to accommodate the redevelopment of the Site, soil in the vicinity of three of the sample locations (PD-3, PD-4, and PD-5) required excavation.

An area measuring approximately 10 feet long by 10 feet wide by 2 feet below grade was excavated at each of the three sample locations - PD-3, PD-4, and PD-5; (see excavation areas named EXC-PD3, EXC-PD4, and EXC-PD5; see on Figure 4).

As described in the letter from ARCADIS to U.S. EPA dated September 15, 2010 (ARCADIS 2010b), instead of hauling this excavated soil to a landfill for disposal, the soil that was excavated at these three locations was ~~encapsulated-consolidated~~ within the area ~~of excavation titled PCB-EXC-3~~ along the western property boundary at soil sample locations W1-SDWall2' and W2-SDWall2' (see Figures 3 and 4).

Approximately 20 to 25 cubic yards of soil from the three areas of excavation (EXC-PD3, EXC-PD4, and EXC-PD5) was consolidated within the area along the western property boundary that encompasses soil sample locations W1-SDWall2' and W2-SDWall2' (see Figures 3 and 4). The consolidated soil was placed at an elevation of approximately 2.5 to 3 feet set to the City of Oakland Vertical Datum, which is equivalent to approximately 5 feet below the surface of the pavement in this area of the Site. The excavation where the soil was placed was lined with Geotextile fabric.

~~and the encapsulated soil was also covered with Geotextile fabric prior to raising the grade and compacting the area. As requested by U.S. EPA, the excavated soil was placed in Geotextile fabric and placed approximately 3 feet below grade at excavation area PCB-EXC-3. A total of approximately 20 to 25 cubic yards of soil from the three areas was encapsulated.~~

~~An area measuring approximately 10 feet long by 10 feet wide by 2 feet below grade was excavated at each of the three locations (PD-3, PD-4, and PD-5; see Figure 3).~~

In accordance with the methods provided in the SICP, confirmation soil samples were collected from the sidewalls and the base of ~~each~~ excavations EXC-PD3, EXC-PD4, and EXC-PD5 (a total of five soil samples from each area) and analyzed for PCBs (see Figure ~~34~~). These confirmation soil samples were collected after the excavated soil was placed in the consolidation area (EXC-PCB3). The analytical results for these samples are provided in the following table Table 2 (below). As indicated, PCBs were not detected in these confirmation soil samples at concentrations above the site-specific cleanup goal. Laboratory reports for these samples are included as Attachment 1 to this letter.

Table 2
Post-Demolition Excavation
Confirmation Soil Samples
concentrations in mg/kg

Sample ID	Notes	Date	PCBs
EXC-PD3- EXC-NORTH 2'		10/27/10	<0.012
EXC-PD3- EXC-SOUTH 2'		10/27/10	<0.012
EXC-PD3- EXC-EAST 2'		10/27/10	<0.012
EXC-PD3- EXC-WEST 2'		10/27/10	<0.012
EXC-PD3- EXC-BOTTOM 2'		10/27/10	<0.012
EXC-PD4- EXC-NORTH 2'		10/27/10	<0.012
EXC-PD4- EXC-SOUTH 2'		10/27/10	<0.012
EXC-PD4- EXC-EAST 2'		10/27/10	0.016
EXC-PD4- EXC-WEST 2'		10/27/10	<0.012
EXC-PD4- EXC-BOTTOM 2'	1	10/27/10	0.063
EXC-PD5- EXC-NORTH 2'		10/27/10	<0.012
EXC-PD5- EXC-SOUTH 2'		10/27/10	<0.012
EXC-PD5- EXC-EAST 2'		10/27/10	<0.012
EXC-PD5- EXC-WEST 2'		10/27/10	0.030
EXC-PD5- EXC-BOTTOM 2'		10/27/10	0.025
REGULATORY CONCENTRATIONS			
Soil Cleanup Goal			0.130

Notes:

1 - Concentrations of PCBs are reported as a combination of Aroclor 1254 and 1260.

Samples analyzed by TestAmerica Laboratories Inc. for PCBs using EPA Test Method 8082.

~~Notes: The depth of the samples were established by subtracting the sample elevation from the finished floor elevation of the top of the TSCA cap~~

PCB-Affected Containing Soil Remaining at the Site

~~Soil containing PCB concentrations above the PCB-cleanup goal of 0.130 mg/kg was left in place at the Site beneath the TSCA cap at 12 locations. The locations of the 12 soil samples that contain concentrations above the PCB cleanup goal of 0.130 mg/kg are illustrated on Figure 3. The following text provides a brief description of the soil that remains in place above the PCB-cleanup goal of 0.130 mg/kg.~~

The following 12 soil samples listed in Table 3 contained PCBs at concentrations greater than 0.130 mg/kg and represent soil that remains in place beneath the TSCA cap (see Figure 3).

Table 3
Samples Contained PCBs at Concentrations Greater Than 0.130

Sample ID	Depth below TSCA Cap (in feet)	PCBs (in mg/kg)
50' North 1 - SDWALL 1'	1.0	0.135
50' North 2 - SDWALL 1'	1.3	0.160
50' North 3 - SDWALL 1'	1.4	0.250
25' North 7 - SDWALL 1'	1.3	0.330
S1-SDWALL 2' R1	1.2	0.230
NE-CORNER 3' R1	2.2	0.270
W1-SDWALL 2'	3.4	0.420
W2-SDWALL 2'	4.0	2.500
SW-Bottom 6' R2	3.9	0.370
PD-1	1.3	0.372
PD-2	1.4	0.940
PD-6	1.2	0.535

Notes: The depth of the samples below the TSCA Cap was established by subtracting the sample elevation from the finished floor elevation of the top of the TSCA cap.

However, due to geotechnical work conducted to strengthen site soils for the redevelopment of the Site, the soil currently in those 12 locations may have been moved. Thus the PCB-containing soil may be at locations that are not represented by the samples collected in those locations before the geotechnical and grading work. The geotechnical work to strengthen the soil included the cement treatment of the upper 18 inches of soil across the Site. This may have resulted in the movement of soil at the 12 locations where PCBs were detected at concentrations greater than the cleanup goal. ~~this paragraph must be consistent with the cleanup report.~~

ProUCL calculations prior to grading and geotechnical work at the Site demonstrated the 95% Upper Confidence Limit (UCL; 0.174 mg/kg total PCBs) was slightly higher than the cleanup level of 0.13 total PCBs. Figure 3 depicts the locations of the samples that contain PCBs at concentrations greater than 0.130 mg/kg prior to stabilization. The concentrations of the PCBs remaining in soil were mitigated by the construction of the cap (see the Mitigation Measures section below).

Soil represented by samples 50' North 1-SDWALL1', 50' North 2-SDWALL1', and 50' North 3-SDWALL1' is now located beneath the parking areas that serve as the TSCA cap (see Figure 3). In this area (from the top down) the cap consists of 2.5 inches of asphalt concrete (the ground surface) that was placed on top of 8 inches of imported aggregate base rock that lies on top of the cement-treated soil (where the affected soil is located).

Soil represented by sample locations PD-1 and SW-Bottom 6'R2 are now beneath the "rat slab" that serves as the TSCA cap (see Figure 3). In this area (from the top down), the cap consists of 2 inches of cement rat slab that was placed on top of 4 inches of imported base rock that lies on top of the cement-treated soil (where the affected soil is located). This rat slab design was approved by U.S. EPA in a letter to Aspire dated April 5, 2011.

Soil at sample location PD-2 is now beneath the pedestrian walkway that serves as the TSCA cap in this portion of the Site (see Figure 3). In this area (from the top down), the cap consists of 4 inches of Portland Cement (the ground surface) that was placed on top of 4 inches of imported base rock that lies on top of the cement-treated soil.

Soil at sample locations 25' North 7-SDWALL1', S1- SDWALL 2' R1, W1-SDWALL 2' (consolidation area), W2-SDWALL 2' (consolidation area), and PD-6 are now beneath the vehicle traffic area that serves as the TSCA cap in this portion of the Site (see Figure 3). In this area (from the top down), the cap consists of 3 inches of asphalt concrete (the ground surface) that was placed on top of 10 inches of imported base rock that lies on top of the cement-treated soil.

Revised Health Risk Screening Calculations

U.S. EPA requested that the analytical results for the 15 excavation confirmation soil samples collected in October 2010 be included in the health risk screening calculations conducted for the Site. The revised spreadsheets that were used to calculate the revised 95% ~~upper confidence limit (UCL)~~ and the Estimated Risk Based on Representative Concentrations are provided in Attachment 2 ~~of this letter~~. ~~As indicated, the revised 95% UCL for the concentration of PCBs remaining in place is 0.167-174 mg/kg; and the estimated risk associated with this PCB concentration is 1.3×10^{-6} and the estimated hazard index (HI) for PCBs in soil is 1.3.~~ The risk posed by PCBs in this soil is mitigated by the TSCA cap constructed at the Site (i.e., the building slabs, the roads, and the sidewalks; see Figure 3 and the Mitigation Measures section below).

As provided in the Implementation Report, a human health risk screen was performed considering the soil that was left in place after the removal actions in the 0 to 2 feet below ground surface interval. This included analytical data for soil samples collected during the site characterization activities and post-removal confirmation soil sampling events. Data associated with soil that was removed from the Site (i.e., excavated, transported, and disposed of off site) were removed from the data set. Therefore, the data set consists of only data associated with soils remaining on site. A list of the PCB in-place soil samples used for this evaluation is presented in Attachment 2.

Exposure point concentrations (EPCs) of the post-removal constituents of concern (COCs) were used to perform the human health risk screen. The COCs include arsenic, lead, total petroleum hydrocarbons, and PCBs. This addendum report addresses the removal action associated with the PCBs only. The EPCs for the selected COCs were compared to Recommended Cleanup Goals presented in the Revised Corrective Action Plan (CAP; LFR 2009a). The U.S. EPA software ProUCL Version 4.00.05 was used to perform the statistical evaluation. EPCs were calculated for COCs with a minimum of six detections. Maximum detected concentrations were used for COCs with fewer than six detections.

Details on the statistical evaluation and representative concentrations are included in Attachment 2 to this letter.

Health Risk Screen

Comparisons were performed as follows for carcinogenic compounds:

$$\text{RiskEPC} = \frac{\text{EPC}_{\text{soil}} \times T_{\text{Risk}}}{\text{CUG}}$$

Where:

RiskEPC = estimated risk for COC (target = 10^{-6})

EPC_{soil} = exposure point concentration for soil

T_{Risk} = target risk used for the CUG calculation (10^{-6})

CUG = cleanup goal presented for the COCs in CAP

Comparisons were performed as follows for non-carcinogenic compounds:

$$\text{HazardEPC} = \frac{\text{EPC}_{\text{soil}}}{\text{CUG}}$$

Where:

Hazard EPC = estimated risk for Site (target = 1)
EPC_{soil} = exposure point concentration for soil
CUG = cleanup goal presented for the COCs in CAP

The estimated risk based on the [health risk](#) screen is 1.3×10^{-6} . PCBs are the only in-place COCs with an estimated risk greater than 1×10^{-6} . The estimated HI is 1.3. PCBs are the only in-place COCs with an estimated HI greater than 1.

Mitigation Measures

This section ~~of the letter report~~ provides a summary of the mitigation measures that have been implemented at the Site.

TSCA Cap

In accordance with ~~a letter~~s from the U.S. EPA to CFC dated [April 5, 2011 and](#) June 16, 2011 (U.S. EPA 2011 [a,b](#)), the PCB-~~affected-containing~~ soil has been mitigated by installing a “modified TSCA cap” across the Site. Figure 3 is a map that illustrates the [following](#):

- ~~The~~ redevelopment plan for the property
- ~~T~~he modified TSCA cap
- ~~The and the~~ locations [and concentrations of PCBs detected in](#) ~~of~~ the soil samples that failed the cleanup criteria for PCBs [and remain in place at the Site](#).

Figure ~~4-3~~ is a map that illustrates all in-place PCB soil samples [and Figure 4 illustrates samples that passed and failed the cleanup criteria](#). Figures 5A, 5B, and 5C illustrate in-place PCB soil samples for each area of the Site, in greater detail.

The cap has been installed at the Site as described below (from the bottom up to the ground surface). The TSCA cap is the mitigation measure that has reduced the HI to less than 1.

Trash Enclosure Area

- Native soil
- 18 inches of cement-treated native soil
- 6 inches of imported aggregate base rock
- 6 inches of Portland cement concrete

Pedestrian Walkway Areas - Concrete

- Native soil
- 18 inches of cement-treated native soil
- 4 inches of imported aggregate base rock
- 4 inches of Portland cement concrete

Vehicle Traffic Areas

- Native soil
- 18 inches of cement-treated native soil
- 10 inches of imported aggregate base rock
- 3 inches of asphalt concrete

Parking Areas

- Native soil
- 18 inches of cement-treated native soil
- 8 inches of imported aggregate base rock
- 2.5 inches of asphalt concrete

Pedestrian Walkway Areas - Asphalt

- Native soil
- 18 inches of cement-treated native soil
- 4 inches of imported aggregate base rock
- 2 inches of asphalt concrete

Landscaped Areas

- Native soil
- 18 inches of cement-treated native soil
- 10 inches of native soil

- 12 inches of imported top soil

As requested by U.S. EPA ([U.S. EPA June 2011b](#)), samples of the imported soil to be used in the landscaped areas were collected and analyzed in accordance with the Soil Sampling Plan for imported soil for landscaping dated June 24, 2011 (ARCADIS 2011a). According to information provided by the general contractor, the soil used in the landscaped areas was imported to the Site from West Coast Sand and Gravel from R&B Materials Supply located in Manteca, California.

Two soil samples and one duplicate soil sample of the imported soil were collected and analyzed for PCBs, lead, arsenic, total petroleum hydrocarbons as gasoline (TPHg), and benzene on August 4, 2011. The analytical results for these samples are provided in the laboratory report that is included as Attachment 3. Lead and arsenic were detected in each of the three soil samples and PCBs were detected in one sample at 0.024 mg/kg. TPHg and benzene were not detected at concentrations above the laboratory reporting limit (see Attachment 3). The results of these analyses indicated that the concentrations of lead, arsenic, and PCBs detected in the soil samples were less than the cleanup goals established for the Site and the soil was imported to the Site.

TSCA Cap Inspection

The TSCA cap will be visually inspected annually for cracks or differential settlement. The inspection procedures are described in detail in the draft O&M Plan and deed notice for the Site dated October 2011. The inspections will be conducted by a California-licensed Engineer or Geologist. The results of the inspections will be documented in a brief summary letter that will include photographs and a map. The letters will be transmitted to the U.S. EPA for review and comment.

All identified cracks or settlements will be repaired by a California-licensed General Engineering Contractor to provide equipment and experienced personnel to conduct the excavation work. The personnel will have the appropriate Occupational Safety and Health Administration ([OSHA](#)) training for sites with affected soil and groundwater (HAZWOPER). Repair activities will be directed by individuals working under the direct supervision of a California Professional Geologist or Professional Engineer. Soil generated through the repair activities will be handled in accordance with the Soil Management Plan ([Appendix — Attachment 5](#)) that was included in the grading plan for this project. The repairs will be documented in a brief summary letter that will include photographs and a map.

PCB-Affected Containing Soils and Materials Disposal

Three in-situ soil samples collected at the Site contained PCBs at concentrations greater than 50 mg/kg (LFR 2006). Because of these in-situ soil samples this Site contained PCB-affected soil in several locations at concentrations greater than 50 mg/kg, the U.S.-U.S. EPA was contacted and included to provide regulatory oversight for the TSCA issues related to the PCB-affected-containing soil. Specifically, in-situ soil sample 4B collected approximately 0.5 feet below the ground surface near excavation EXC-PCB1 in March 2005 contained PCBs at 69.68 mg/kg (LFR 2006). Two in-situ soil samples B-8 and B-13, collected approximately 0.5 feet below the ground surface in the northern corner of the near the location where PCB-affected-containing soil was excavated in 1992, contained PCBs at 960 and 45,470 mg/kg (Pacific Electric Motors 1993). Based on this data for the in-situ soil samples, excavated soil from samples collected from the following areas contained concentrations greater than 50 mg/kg: excavation EXC-PCB1 and soil excavated in the area near the excavation that took place in 1992 (within excavation EXC4) were transported and disposed of as a hazardous waste at Waste Management's Kettleman Hills Landfill. The removal action for the PCB-affected soil was documented in the letter report dated August 12, 2010 (ARCADIS 2010a).

The final extent of each excavation at the Site was determined by a combination of site-representative concentrations (95% UCL of residual concentrations). The original expected total volume of known affected soil to be excavated was approximately 1,250 in-place cubic yards. The results of the confirmation soil samples collected from excavation areas EXC1, EXC2, EXC4, PCB-EXC1, PCB-EXC2, PCB-EXC3, and PCB-EXC4 resulted in a significant increase in the volume of soil that was removed from the Site. A total of approximately 8,400 tons of soil was removed from the Site.

The excavated soil from the Site was staged on-site in stockpiles pending characterization for disposal; soil from excavation EXC-PCB1 and the area near the excavation that took place in 1992 (within excavation EXC4) were combined. This soil was transported and disposed of as PCB Remediation Waste at Waste Management's Kettleman Hills Landfill.

In-situ soil samples collected from excavations EXC-PCB2, EXC-PCB3, EXC-PCB4, and EXC4 did not contain PCBs at concentrations greater than 50 mg/kg (ARCADIS 2011b). Therefore, the soil from excavations EXC-PCB2, EXC-PCB3, EXC-PCB4, and EXC4 was transported and disposed of at Republic Services Keller Canyon Landfill located in Pittsburg, California. Soil from excavation EXC4 that was

transported to the Keller Canyon Landfill was from areas located outside the area where the 1992 excavation of PCB-affected-containing soil took place (i.e., where in-situ soil samples ~~that~~ contained less than 50 mg/kg PCBs).

Due to elevated lead soluble threshold limit concentration (~~STLC~~) results in soil samples collected from the combined excavation EXC1 and EXC2 (located near 66th Avenue), this soil was characterized as non-Resource Conservation and Recovery Act (RCRA) solid hazardous waste and transported for disposal at Chemical Waste Management's Kettleman Hills Landfill.

~~The~~ Table 4 below identifies soil disposal classifications, quantities, and destinations for PCB-affected-containing soil. Copies of the PCB-affected-containing soil waste manifests are included in Attachment 4, in addition to weight summary reports for non-PCB-affected-containing soils from the landfills. ~~Note, copies for three manifests for PCB-affected soil are outstanding, and have been requested by ARCADIS from Kettleman Hills Landfill. These include the following manifest numbers:- 005417521JJK, 005417522JJK, and 005417534JJK.~~ The soil included in these shipments is accounted for in ~~the~~ Table 4 below, and the PCB-affected-containing soil summary table included in Attachment 4. The removal action for the PCB-affected-containing soil was documented in the letter report dated August 12, 2010 (ARCADIS 2010a).

Table 4

Soil Disposal Summary

Destination	Waste Classification	Volumes (tons)
Kettleman Hills Landfill	Non-RCRA (PCB--TSCA) (50 mg/kg & greater)	1,280.85
Kettleman Hills Landfill	Non-RCRA (Lead)	1,977.83
Vasco Road Landfill	Non-Hazardous	5,102.04
Keller Canyon Landfill	Construction Debris (includes building demolition debris)	2,476.60

In addition to the soil removal, PCB-affected-containing building materials were also removed from the Site. ~~As requested by the U.S. EPA, s~~ Samples of the building materials that comprised the two warehouses that were demolished were collected in October 2009. These samples were collected and analyzed in accordance with the Sampling Plan for Building Materials provided in the letter from LFR to the U.S. EPA, dated October 19, 2009 (LFR 2009b). Samples of the wood, paint, and concrete contained PCBs at concentrations up to 13 mg/kg (i.e., all less than 50 mg/kg; see Test America laboratory reports for "Job Number: 720-23737-1" in Attachment 1).

Samples from building materials that included window caulk, paint, roofing materials, and concrete were collected and submitted to a state-certified laboratory for PCB analysis using U.S. EPA Test Method 8082. The laboratory reports for these samples are included on the CD that accompanies this report (Attachment 1). PCBs were present in concentrations above the laboratory reporting limits (up to 13,000 µg/kg; see Table 5 below) in the samples collected from window caulk, paint, and concrete at the Site. The demolition debris from the demolition of both structures, including but not limited to wood, metal, glass, and concrete, was consolidated on site and transported for disposal as bulk PCB remediation waste at Republic Services' Keller Canyon Landfill located in Pittsburg, California. Based on the weight tickets provided by Republic Services, a total of 2,476.60 tons ~~comprised~~ of bulk PCB product waste (comprised of window caulking and other building materials) and PCB remediation waste (concrete, metal, glass, and wood affected by PCBs) was disposed of at the Keller Canyon Landfill. The majority of this material was concrete. The weight summary report for these materials is provided in Attachment 4.

Table 5
Building Materials
Confirmation Soil Samples
concentrations in µg/kg (micrograms per kilogram)

Sample ID	Date	PCB 1016	PCB 1221	PCB 1232	PCB 1242	PCB 1248	PCB 1254	PCB 1260
Roof Bldg 1	10/29/09	<290	<290	<290	<290	<290	<290	<290
Floor Caulk	10/29/09	<2,900	<2,900	<2,900	<2,900	<2,900	<2,900	11,000
Window Caulk	10/29/09	<500	<500	<500	<500	<500	<500	2,400
Window Paint Bldg 1	10/29/09	<5,800	<5,800	<5,800	<5,800	<5,800	<5,800	13,000
Paint Bldg 1	10/29/09	<300	<300	<300	<300	<300	<300	340
Concrete Cap	10/29/09	<50	<50	<50	<50	<50	<50	89
Silver Paint Bldg 2	10/29/09	<290	<290	<290	<290	<290	<290	1,600

Note: Samples analyzed by TestAmerica Laboratories Inc. for PCBs using EPA Test Method 8082.

Table 6
U.S. EPA Conditions of Approval Checklist

<u>U.S. EPA Conditions of Approval</u>	<u>Date of Completion/U.S. EPA Approval</u>
<u>Written, Signed Verification by Owner of Aspire Property and Party Conducting Cleanup</u>	<u>Presented on November 18, 2009; EPA conditional approval on November 25, 2009 (via email)</u>
<u>Pre-Demolition Survey</u>	<u>Presented on November 18, 2009; EPA conditional approval on November 25, 2009 (via email)</u>
<u>Sampling and Analysis Plan</u>	<u>Presented on November 5, 2009; EPA conditional approval on November 25, 2009 (via email)</u>
<u>Sequence of Pre-Cleanup PCB Soil Characterization; Pre-Demolition Sampling (Building Materials); Soil Remediation; and Soil Cleanup Verification</u>	<u>Presented on November 18, 2009; EPA conditional approval on November 25, 2009 (via email)</u>
<u>PCB Remediation Waste; PCB Bulk Product Waste; Cleanup Wastes; and Disposal Requirements</u>	<u>Presented on November 18, 2009; EPA conditional approval on November 25, 2009 (via email)</u>
<u>Measures to Prevent Exposure of Neighboring Communities to Airborne Particulates</u>	<u>Presented on November 18, 2009; EPA conditional approval on November 25, 2009 (via email)</u>
<u>Cleanup Levels</u>	<u>Presented on November 18, 2009; EPA conditional approval (via email) on November 25, 2009; December 18, 2009, and January 21, 2010</u>
<u>Cap (Protective Barrier)</u>	<u>Presented on April 25, 2011; EPA approval on June 16, 2011</u>
<u>Risk Management Plan and Deed Notice</u>	<u>Presented on October 15, 2013; EPA approval pending</u>
<u>Recordkeeping and PCB Cleanup</u>	<u>Presented on October 15, 2013; EPA approval pending</u>
<u>Restoration of the Site</u>	<u>Presented on October 15, 2013; EPA approval pending</u>



Ms. Carmen Santos
October 15, 2013

We at ARCADIS appreciate working with you and your team and look forward to bringing this project to closure with the U.S. EPA and Alameda County Department of Environmental Health in the very near future.

Sincerely,
ARCADIS U.S., Inc.

Ron Goloubow, P.G.
Principal Geologist

Copies:

~~Kahinus D. Eatman - Pacific Charter Schools~~
~~Mala Batra~~ **Angela Andrews** - Aspire Public Schools
Paresh Khatri - Alameda County Department of Environmental Health

Enclosures:

Figures

Figure 1 - Site Vicinity Map
Figure 2 - Site Plan
Figure 3 - Site Plan Showing Pavement Plan/Cap and In-Place Soil Exceeding PCB Cleanup Goals
Figure 4 - In-Place Soil Samples Compared to PCB Cleanup Goals
Figure 5A - Excavations PCB-1 and PCB-2 Soil Samples Compared To PCB Cleanup Goals
Figure 5B - Excavations EXC-1 and EXC-2 PCB Concentrations
Figure 5C - Excavations EXC-4, PCB-3, and PCB-4 PCB Concentrations

Attachments

Attachment 1 - Laboratory Analytical Data for Soil Samples (provided on CD)
Attachment 2 - Revised Human Health Risk Evaluation
Attachment 3 - Laboratory Analytical Data Report for Imported Soils
Attachment 4 - Waste Disposal Information
Attachment 5 - Revised Draft Operations and Maintenance Plan and Soil Management Plan
Attachment 6 - August 2010 TSCA Implementation Report
Attachment 7 - Correspondence with USEPA

References

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Ms. Carmen Santos
October 15, 2013

Polychlorinated Biphenyls Cleanup Notification under Toxic Substances Control
Act – New Request for Additional Cap Modification. June 16.

Attachment 1

Laboratory Analytical Data for
Soil Samples

(provided on CD)

Attachment 2

Revised Human Health Risk
Evaluation

Attachment 3

Laboratory Analytical Data
Report for Imported Soils

Attachment 4

Waste Disposal Information

Kettleman Hills Landfill Summary
(Non-RCRA and TSCA Soil) and
TSCA Manifests

Keller Canyon Landfill Summary
(Construction Debris)

Vasco Road Landfill Summary
(Non-Hazardous Soil)

Attachment 5

Revised Draft Operations and
Maintenance Plan and Soil
Management Plan

Attachment 6

August 2010 TSCA
Implementation Report

Attachment 7

Correspondence with USEPA